

**What is claimed is:**

1. A dispersant based on copolymers obtainable by polymerization of
  - 5 a) 5 to 70 wt. % of one or more monomers from the group consisting of ethylenically unsaturated monocarboxylic acids, ethylenically unsaturated carboxamides, ethylenically unsaturated dicarboxylic acids and anhydrides thereof, each  
10 with 4 to 8 C atoms, and (meth)acrylate monoesters of dialcohols with 2 to 8 C atoms,
  - b) 1 to 40 wt. % of one or more monomers from the group consisting of ethylenically unsaturated compounds with sulfonate or sulfate functional  
15 groups,
  - c) 10 to 80 wt. % of one or more monomers from the group consisting of ethylenically unsaturated compounds of polyethylene glycols with 1 to 300 ethylene oxide units, and terminal OH-groups or  
20 ether groups -OR', wherein R' can be an alkyl, aryl, alkaryl or aralkyl residue with 1 to 40 C atoms,
  - d) 5 to 80 wt. % of one or more monomers from the group consisting of ethylenically unsaturated  
25 compounds of polyethylene glycols with 1 to 300 alkylene oxide units from alkylene groups with 3 to 4 C atoms, and terminal OH-groups or ether groups -OR', wherein R' can be an alkyl, aryl, alkaryl or aralkyl residue with 1 to 40 C atoms, each based on  
30 the total weight of the copolymer, the stated amounts in wt. % totaling 100 wt. %.
2. The dispersant as claimed in claim 1, characterized in that the monomer units a) are derived from one  
35 or more monomers from the group consisting of acrylic acid, methacrylic acid, itaconic acid, fumaric acid, maleic acid, and the salts of the said carboxylic acids, maleic anhydride,

acrylamide, methacrylamide, hydroxyethyl  
(meth)acrylate, hydroxypropyl (meth)acrylate and  
hydroxybutyl (meth)acrylate.

- 5 3. The dispersant as claimed in any of claims 1 and 2,  
characterized in that the monomer units b) are  
derived from one or more monomers from the group  
consisting of vinylsulfonic acid and alkali and  
alkaline earth metal salts thereof, styrenesulfonic  
10 acid and alkali and alkaline earth metal salts  
thereof, methallylsulfonic acid and alkali and  
alkaline earth metal salts thereof, p-  
methallyloxyphenylsulfonic acid and alkali and  
alkaline earth metal salts thereof, and sulfonic  
15 acids of the general formula  $\text{CH}_2=\text{CR}^1-\text{CO}-\text{X}-\text{CR}^2\text{R}^3-\text{R}^4-$   
 $\text{SO}_3\text{H}$  and alkali and alkaline earth metal salts  
thereof, wherein  $\text{X} = \text{O}$  or  $\text{NH}$ , and  $\text{R}^1$ ,  $\text{R}^2$  and  $\text{R}^3$  are  
the same or different and have the meaning H and  $\text{C}_1$   
to  $\text{C}_3$  alkyl, and  $\text{R}^4$  is  $\text{C}_1$  to  $\text{C}_4$  alkylene.  
20
4. The dispersant as claimed in any of claims 1 to 3,  
characterized in that the monomer units c) are  
derived from one or more monomers from the group  
consisting of acrylate esters and methacrylate  
25 esters of polyethylene glycols and alkyl ethers  
thereof with 1 to 6 C atoms, each with 1 to 150  
ethylene oxide units.
5. The dispersant as claimed in any of claims 1 to 4,  
30 characterized in that the monomer units d) are  
derived from one or more monomers from the group  
consisting of acrylate esters and methacrylate  
esters of poly-propylene glycols and polybutylene  
glycols and alkyl ethers thereof with 1 to 6 C  
35 atoms, each with 3 to 100 alkylene oxide units.
6. The dispersant as claimed in any of claims 1 to 4,  
characterized in that the monomer units d) are  
derived from one or more monomers from the group

consisting of acrylate esters and methacrylate esters of polypropylene glycols and polybutylene glycols, which contain 3 to 35 propylene oxide or butylene oxide units, capped with 5 to 80 ethylene oxide units.

7. The dispersant as claimed in any of claims 1 to 5, characterized in that hydrophobic comonomer units e), which are derived from (meth)acrylate esters of alcohols with 1 to 15 C atoms or vinylaromatics, are also contained.
8. The dispersant as claimed in any of claims 1 to 7, characterized in that with these, in formulae for self-leveling, hydraulically setting mixtures, on loading in the linear viscoelastic region the storage modulus  $G'$  is higher than the loss modulus  $G''$ , on loading outside the linear viscoelastic region a tangent of the loss angle of  $< 80$  results, and on subsequent relaxation within less than 15 mins the storage modulus  $G'$  is again higher than the loss modulus  $G''$ .
9. A process for the production of a dispersant of any of claims 1 to 8 by radical-initiated polymerization.
10. The use of a dispersant of any of claims 1 to 8 in the spray drying of aqueous polymer dispersions of homo- or copolymers of one or more monomers from the group consisting of vinyl esters of unbranched or branched alkylcarboxylic acids with 1 to 18 C atoms, acrylate esters or methacrylate esters of branched or unbranched alcohols with 1 to 15 C atoms, dienes, olefins, vinylaromatics and vinyl halides.
11. The use of a dispersant of any of claims 1 to 8 as a cement plasticizer.

12. The use as claimed in claim 10, characterized in that the dispersant is used as atomization aid in the spray drying of aqueous dispersions of vinyl acetate homopolymers, copolymers of vinyl acetate with ethylene, copolymers of vinyl acetate with ethylene and one or more other vinyl esters, copolymers of vinyl acetate with ethylene and acrylate esters, copolymers of vinyl acetate with ethylene and vinyl chloride, styrene-acrylate ester copolymers and styrene-1,3-butadiene copolymers.
13. The use of the redispersion powders obtainable as claimed in claim 12 in construction chemical products, optionally in combination with hydraulically setting binders such as cements (Portland, aluminate, trass, slag, magnesia and phosphate cement), or gypsum, lime and waterglass, for the production of construction adhesives, plasters, fillers, floor fillers, leveling compounds, grouts, jointing mortars and paints.
14. The use as claimed in claim 13 in self-leveling floor fillers and flowable screeds.
15. The use of redispersion powders containing dispersants as claimed in any of claims 1 to 8 as additives with plasticizing action.